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09/889,380	07/16/2001	Masashi Nakamura	450106-02849	3746

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FROMMER LAWRENCE & HAUG
745 FIFTH AVENUE- 10TH FL.
NEW YORK, NY 10151

EXAMINER	
SHANG, ANNAN Q	

ART UNIT	PAPER NUMBER
2424	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/889,380	NAKAMURA ET AL.	
	Examiner	Art Unit	
	ANNAN Q. SHANG	2424	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 February 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,6-14 and 18-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,6-14 and 18-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1, 2, 6-14 and 18-25 have been considered but are moot in view of the new ground(s) of rejection.

With respect to the rejection of the last office action mailed 12/01/08, Applicant amends claims discloses the claimed invention and the prior arts of record and further argues that the prior arts of record do not teach the amended claims limitations, i.e., that the prior arts of record do not discloses sending "…higher layer commands…" etc. (see page 10 of 17 of Applicant's Remarks).

In response, Examiner disagrees. Examiner notes applicant's arguments and amendment, however, Chimoto discloses a TV receiver with various processing modules interconnected by a bus, where a host controller (313) controls the various processing modules accordingly to process streams (transport stream) and a hardware driver (DMA-312) for performing other functions on some processing block(s). The various processing blocks performing predetermined function(s) assigned to the blocks in response to a command. Chimoto TV Receiver, receives a transport stream, including software containing various commands which instructs the various processing blocks to perform various predetermined function(s), processing various portions of the transport stream data accordingly (figs.1-4+, col.1, line 51-col.2, line 35, col.7, line 32-col.8, line 52, col.9, lines 21-62, col.10, lines 23-63 and col.13, line 41-col.14, line 1+). Chimoto is silent as to the type of command or instructions that is sent being "high layer" as claimed by Applicant. Nevertheless, the examiner submits that it is notoriously

well known in the art to use high layer commands for the purpose of allowing flexibility in the system by obviating the need for specialized drivers to communicate with different components. Furthermore Applicant states that the claimed "higher layer" is disclosed in the specification, however these limitations are not clearly recited in the claims limitations and hence do not carry any weight. Clearly Chimoto discloses a system where a command sent by the host to a processing unit is directed to the particular processing unit and it's free of those functionality instructions that control individual functions of the hardware processing units that controls individual processing blocks (col.7, line 32-col.8, line 52, col.9, lines 21-62, col.10, lines 23-63 and col.13, line 41-col.14, line 1+). The amended claims do not overcome the prior arts of record. The amendment to the claims necessitated the new ground(s) of rejection discussed below. **This office action is made final.**

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-2, 7-9, 13-14 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chimoto et al (5,838,383)**.

As to Claim 1, **Chimoto** reference discloses a multimedia television receiver and

method of booting the same and further discloses a digital signal processing apparatus, comprising:

the claimed "a plurality of digital signal processing blocks connected to a common bus, each digital signal processing block including at least a signal processing block for decoding and processing high speed streams data" is met by "[a]s FIG. 1 shows, the television receiver 301 comprises a bus 302, an NTSC decoder module 303, a digital broadcast-signal receiving module 304, a depacket processing module 305, a digital cable module 306, an MPEG video module 304, and an MPEG audio module 308. The bus 302 connects the modules 302 to 308, one another. The receiver 301 further comprises...a CPU 313" (col.7, lines 50-60) where "[t]he MPEG video module 307 decodes the video data stream into image data" each of the plurality of digital signal processing blocks performing a predetermined function assigned to that block and having a processing unit for performing the predetermined function in response to a command supplied thereto and cooperating with a hardware driver (DMA-312) for performing other functions on some processing block(s) and controlling a hardware of particular structure (col.7, lines 50-60);

the claimed "each of said plurality of digital signal processing blocks having a signal processor" and "wherein each of said signal processors interprets and executes said command" is met by "[t]he CPU 313 executes this program to control the other components of the receiver 301. The CPU 313 can set parameters in the modules 303 to 308 and change the parameters whenever necessary" (col.7, lines 61-66) wherein the control to set parameters [commands] is transmitted through the bus 302 as

illustrated in Figure 1; Chimoto discloses that, "[t]he CPU 313 (host) supplies prescribed parameters through the DMA device 312 and the bus 302 to the digital broadcast-signal receiving module 304, the depacket processing module 305, the PEG video module 307, and the MPEG audio module 308. Once these parameters are set in the modules 304, 305, 307 and 308, these modules are made to receive and process BS signals" (col.9, lines 27-34) where the a processor for interpreting and executing the command parameters and operates the cooperating hardware in accordance with the command is inherent to the operation of the modules in order to properly process the specified signals. Chimoto further discloses that, "[t]he CPU 313 [host processing block] executes this program to control the other components of the receiver 301. The CPU 313 can set parameters in the modules 303 to 308 and change the parameters whenever necessary" Furthermore TV Receiver, receives a transport stream, including software containing various commands which instructs the various processing blocks (including the host processing block) to perform various predetermined function(s), processing various portions of the transport stream data accordingly; Chimoto discloses a system where a command sent by the host to a processing unit is directed to the particular processing unit and it's free of those functionality instructions that control individual functions of the hardware processing units that controls individual processing blocks (figs.1-4+, col.1, line 51-col.2, line 35, col.7, line 32-col.8, line 52, col.9, lines 21-62, col.10, lines 23-63 and col.13, line 41-col.14, line 1+); the claimed "and that is not on real time basis' is met by "the DMA device 312 controls the transfer of data through the bus 302" wherein it is inherent that the command not be transmitted on a real time basis

when data is in the process of being transferred on the bus in order to avoid transfer errors; the claimed "a bus for connecting said host processing black and said plurality of digital signal processing blocks for transferring said command and for transferring said data of streams" is met by bus 302 connected to a plurality of modules 303-308 [digital signal processing blocks] and the CPU 313 [host processing block] as illustrated in Figure 1; where "It]he CPU 313 supplies prescribed parameters through the DMA device 312 and the bus 302 to the digital broadcast-signal receiving module 304..." (col.9, lines 27-34) and "[i]n the receiver 301, the receiving module 304 selects the BS signals of the channel designated by the remote control data supplied from the remote-controller 309 and converts them into a stream of bits. The stream of bits is supplied to the bus 302" (col.9, lines 35-50).

Chimoto is silent as to the type of command that is sent being high layer.

Nevertheless, the examiner submits that it is notoriously well known in the art to use high layer commands for the purpose of allowing flexibility in the system by obviating the need for specialized drivers to communicate with different components.

Therefore, the examiner submits that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Chimoto et al. commands accordingly for the above stated advantages.

As to claim 2, the claimed "wherein said plurality of digital signal processing blocks include at least a front end block for processing a received signal of a digital broadcast" is met by digital broadcast-signal receiving module 304 and digital cable module 306" (col.7, lines 50-60).

As to claim 7, the claimed "wherein the data of streams contains video data and / or audio data" is met by "[t]he MPEG data stream consists of a video data stream and an audio data stream" (col.9:46-47).

As to claim 8, the claimed "wherein the video data and / or the audio data has been compressed" is met by "the MPEG data stream" (col.9:46-47) wherein MPEG is a compression scheme.

As to claim 9, the claimed "wherein said bus is a general-purpose bus" is met by bus 302 as illustrated in Figure 1. The claimed "wherein each block connected to .said bus can be added or substituted" is met by "the modules 303 to 308 can be removed form the housing of the receiver 301. Therefore, the modules 303 to 308 can easily be replaced by other modules to change the functions the receiver 301 can perform.

Furthermore, the receiver 302 may have extra module receptacles to incorporate additional modules" (col.10:54-59).

Claims 13-14 and 19-21, are met as previously discussed with respect to claims 1-2 and 7-9 respectively.

6. Claims 6 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chimoto et al (5,838,383)** as applied to claims 1 and 13 above, and further in view of **Humpleman et al (6,198,479).**

As to claims 6 and 18, Chimoto discloses CPU 313 for executing program to control the other components of the receiver 301 (col.7, lines 61-63), but fail to explicitly teach where the command is described and embedded in a script of hypertext, where

the hypertext is interpreted by a browser and an indication for operating a function is displayed and where a command corresponding to the function is generated.

However, **Humpleman** discloses a home gateway and further teaches where command is described and embedded in a script of hypertext, where the hypertext is interpreted by a browser and an indication for operating a function is displayed and where a command corresponding to the function is generated (col.6, lines 60-66).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Humpleman into the system of Chimoto for the purpose of extending the upgrade functionality of the receiver and allow a user to easily control diverse devices in their home with a single remote control.

7. Claims 10-12 and 22-25, are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chimoto et al (5,838,383)** in further view of **Trovato et al (6,469,742).**

As to claim 10, the claimed "wherein when each block connected to said bus is added or substituted, software for operating the added or substituted block is automatically installed." Note the Chimoto et al. reference discloses "[t]he main memory stores a control program, The CPU 313 executes this program to control the other components &the receiver 301" (col.7:61-65) and "the modules 303 to 308 can be removed form the housing of the receiver 301. Therefore, the modules 303 to 308 can easily be replaced by other modules to change the functions the receiver 301 can perform. Furthermore, the receiver 302 may have extra module receptacles to incorporate additional modules" (col.10:54-59).

Chimoto is silent as to installing software to control the new modules.

However, **Trovato**, discloses consumer electronic devices with adaptable upgrade capability. The claimed "software for operating the added or substituted block is automatically installed" is met by "[o]nce new modules are identified an automatic upgrade may be provided" (col.4:45- 61).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Chimoto adding/substituting modules on the bus with the Trovato et al. automatic installation of corresponding software for the purpose of providing software/driver needs without requiring user interaction and without unnecessarily storing a plurality of different device drivers (col.5:27-34).

As to claim 11, the claimed "wherein software for operating the added or substituted block is stored in a memory there of' is met by the Chimoto et al. and Trovato et al. combination as discussed above wherein "[m]odules 16 may include device drivers and protocols for interfacing with CPU 12 stored in memory 17" (Trovato 4:20-21).

The claimed "wherein when the block is added or substituted, the software stored in the memory is installed" is also met by the Chimoto et al. and Trovato et al. combination as discussed above wherein “[o]nce new modules are identified an automatic upgrade may be provided [/installed]” (Trovato 4:50-51; 5:9-11).

As to claim 12, the claimed "wherein when each block connected to said bus is added or substituted, a service center is accessed through a telephone line, software for operating the added or substituted block is downloaded from the service center through

the telephone line, and the downloaded software is installed" is met by the Chimoto et al. and Trovato et al. combination as discussed above wherein "system 100 includes a remote station 101. Remote station 101 includes a transmitter 102 for transmitting upgrade information to a plurality of devices 10. Transmission of upgraded information may be delivered by a...telephone network... Remote station 101 may further include a receiver 106 for receiving and handling transmission requests from devices 10 which need upgrade or new software pursuant to hardware changes as described above" (Trovato 5:35-49) wherein "[u]pon receiving the appropriate driver(s) or information, device 10 is upgraded and the registry of modules is updated in operating system 20" (Trovato 5:9-11).

Claim 22 is met as previously discussed with respect to the rejection of claim 10.

Claim 23 is met as previously discussed with respect to the rejection of claim 11.

Claim 24 is met as previously discussed with respect to the rejection of claim 12.

Claims 22-24 are met as previously discussed with respect to claims 10-12.

As to claim 25, Chimoto further disclose where CPU 313 processing block has a high level interface for processing the command and where the plurality of digital signal processing blocks has a driver for interpreting the command and low level interface for controlling the hardware (col.8, line 27-37, col.13, line 57-col.14, line 20 and col.36, line 25-col.38, line 1+).

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Annan Q. Shang** whose telephone number is **571-272-7355**. The examiner can normally be reached on **700am-400pm**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Christopher S. Kelley** can be reached on **571-272-7331**. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300.**

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the **Electronic Business Center (EBC) at 866-217-9197 (toll-free)**. If you would like assistance from a **USPTO Customer Service Representative or access** to the automated information system, **call 800-786-9199 (IN USA OR CANADA) or 571-272-1000**.

/Annan Q Shang/

Primary Examiner, Art Unit 2424

Annan Q. Shang